Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

What is claimed is:

1. (previously presented) The process for growing single crystals, wherein crystal material is melted in a crucible and a crystal nucleus is immersed in the molten crystal material and slowly pulled out, by induction heating of an electrically conductive susceptor comprising at least one electrically conductive tube surrounding and heating the crucible, wherein the crystal formed during the pulling is kept at a temperature close to and above a melting temperature of the output material at least while the crystal is slowly pulled out, and maintaining a temperature gradient in the pulled crystal within 4 degrees K per cm.

2. (cancelled)

3. (currently amended) The process according to claim ~~1~~ 23, wherein during the slow pulling-out of the crystal nucleus, a low temperature gradient is set between molten crystal material and the single crystal pulled out of the melt.

4. (cancelled)

5. (previously presented) The process according to claim 23, wherein shielding and additional heating by the susceptor are arranged in such a way that an essentially constant temperature gradient is set in the pulling direction of the crystal.

6. (cancelled)

7. (cancelled)

8. (previously presented) The process according to claim 23, wherein after the pulling of the crystal, the maximum temperature gradient inside the crystal is set to a value below 4°K/cm and the whole crystal is cooled down evenly.

9. (cancelled)

10. (cancelled)

11. (previously presented) The process according to claim 23, wherein at least the slow pulling-out takes place under vacuum.

12. (previously presented) The process according to claim 11, wherein at least the slow pulling-out takes place under vacuum under a pressure of between 10^{-2} and 10^{-8} hectopascals.

13. (cancelled)

14. (previously presented) The process according to claim 23, wherein at least the slow pulling-out takes place in a growing atmosphere selected from the group consisting of argon; nitrogen; a mixture of argon and oxygen, the oxygen proportion preferably being between 0 and 2 vol.-%; a mixture of nitrogen and oxygen, the oxygen proportion preferably being between 0 and 2 vol.-%; and a mixture of argon and hydrogen, the hydrogen proportion preferably being between 0 and 10 vol.-%.

15. (cancelled)

16. (previously presented) The process according to claim 23, wherein the temperature in the environment of the crucible is controlled.

17. (cancelled)

18. (original) The process according to claim 16, wherein the temperature in the environment of the crucible is controlled by suitable choice of the inductor dimension and the susceptor geometry.

19. (previously presented) The process according to claim 23, wherein the temperature gradient along the single crystal grown is controlled or regulated between molten crystal material and the crystal nucleus.

20. (original) The process according to claim 19, wherein the setting of the temperature gradient takes place by means of the inductor dimension and the susceptor geometry.

21. (previously presented) The process according to claim 20, wherein susceptor material is selected depending on crucible material and growing atmosphere.

22. (previously presented) The process according to claim 23, wherein a non-metal crystal nucleus is used.

23. (previously presented) The process for growing single crystals, wherein crystal material is melted in a crucible and a crystal nucleus is immersed in the molten crystal material and slowly pulled out, wherein the crystal formed during the pulling is kept at a temperature close to melting temperature of the output material, wherein a corundum crystal nucleus (Al_2O_3) is used.

24. (previously presented) The process according to claim 23 by induction heating of an electrically conductive susceptor comprising at least one electrically conductive tube surrounding and heating the crucible, wherein the crystal formed during the pulling is kept at a temperature close to and above a melting temperature of the output material at least while the crystal is

slowly pulled out, and maintaining a temperature gradient in the pulled crystal within 4 degrees K per cm.

25. (previously presented) The process according to claim 23, wherein the crystal nucleus is immersed in the crystal material and slowly pulled out in approximately the direction of the crystallographic c-axis with a deviation of less than +15°.

26. (previously presented) A device for growing single crystals having a crucible to receive molten crystal material, a heating device for heating the crucible and the crystal material and a device for pulling the crystal out of the melt using an immersed crystal nucleus wherein at least one of a shield and heating element is provided surrounding the crystal during the pulling which prevents rapid cooling of the solidified crystal material in comparison with the melt and a large temperature gradient within solidified crystal material wherein the heating device comprises an electrically conductive susceptor comprising at least one electrically conductive tube surrounding and heating the crucible and an inductor is provided for inductively heating the susceptor.

27. (original) A device according to claim 26, wherein the heating device consists of a susceptor tube made from electrically conductive material inside of which the crucible is arranged, and an inductor which heats the tube inductively.

28. (original) A device according to claim 27, wherein the tube consists of graphite, tungsten, molybdenum, iridium, rhenium, tantalum, osmium, or an allow of the above-mentioned elements.

29. (original) A device according to claim 27, wherein susceptor length is adjustable.

30. (original) A device according to claim 27, wherein the position of the inductor is adjustable.

31. (original) A device according to claim 26, wherein the crucible consists of iridium, molybdenum, tungsten, rhenium, tantalum, osmium, or an alloy of the above-mentioned elements.

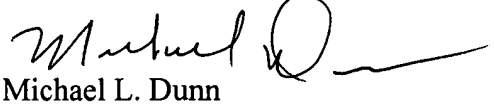
32. (original) A device according to claim 27, wherein the crucible consists of iridium, molybdenum, tungsten, rhenium, tantalum, osmium, or an alloy of the above-mentioned elements.

33. (previously presented) The device according to claim 26 where the susceptor is designed to surround the crystal and maintain a temperature gradient of less than 4° K/cm in crystal material slowly pulled out of the melt.

34. (previously presented) The process according to claim 23 where the susceptor is designed to surround the crystal and maintain a temperature gradient of less than 4° K/cm in crystal material slowly pulled out of the melt.

35. (previously presented) The process according to claim 23, wherein the crystal nucleus is immersed in the crystal material and slowly pulled out in approximately the direction of the crystallographic c-axis with a deviation of less than +15°.

Respectfully submitted,



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